

**REMARKS**

Applicants have amended their claims in order to further define various aspects of the present invention. Specifically, Applicants have amended claim 1 to recite that the base film is formed of an acrylic resin composition containing, as a primary component, a polyacrylate and/or a polymethacrylate (note previously considered claims 4 and 5); and have further amended claim 1 to incorporate therein the subject matter of each of claims 11 and 12. In light of amendments to claim 1, Applicants have canceled claims 4, 5 and 8-12 without prejudice or disclaimer.

Initially, it is respectfully requested that the present amendments be entered, notwithstanding the Finality of the Office Action mailed December 9, 2011. Noting, for example, previously considered claims 4, 5, and 8-12, it is respectfully submitted that the present amendments do not raise any new issues, including any issue of new matter. By incorporating subject matter of claims 5, 11 and 12 into claim 1, while canceling claims 5, 11 and 12, among other claims, it is respectfully submitted that the present amendments materially limit issues remaining in connection with the above-identified application; and, at the very least, present the claims in better form for appeal. Noting contentions by the Examiner in the Office Action mailed December 9, 2011, it is respectfully submitted that the present amendments are timely.

In view of the foregoing, it is respectfully submitted that Applicants have made the necessary showing of good and sufficient reasons under 37 CFR §1.116(b)(3), such that entry of the present amendments is proper.

Applicants respectfully submit that all of the claims presented for consideration by the Examiner patentably distinguish over the teachings of the reference applied by the Examiner in rejecting claims in the Office Action mailed

December 9, 2011, that is, the teachings of U.S. Patent No. 6,326,086 to Mori, et al., under the provisions 35 USC §102 and 35 USC §103.

It is respectfully submitted that the reference as applied by the Examiner would have neither disclosed nor would have suggested such a decorative sheet for simultaneous decoration and injection molding as in the present claims, having both an elongation at break as measured at 120°C of 200% or more, and having an elongation at break as measured at 25°C of 3-10%, achieved with a base film of the decorative sheet which is formed of an acrylic resin composition containing, as a primary component, a polyacrylate and/or a polymethacrylate, and which also includes at least one rubber material selected from the group consisting of acrylic rubber, butadiene rubber and silicon rubber, with a content of the rubber material included in the base film being 3-30 parts by mass based on 100 parts by mass with a base resin also included in the base film. See claim 1.

As described in section [0015] on pages 11 and 12 of Applicants' specification, a decorative sheet having an elongation at break, as measured at 25°C, of 3-10%, exhibits good strength thereof, avoiding breaking of the sheet due to a tensile force applied to the base film when the decorative layer is formed on the base film through printing, and avoiding breaking of the sheet when the sheet is fed to an apparatus for preforming or simultaneous decoration and injection molding; yet wherein the sheet can effectively be trimmed after the molding procedure and the sheet avoids exfoliation at an end portion of the molded product.

Furthermore, the decorative sheet having an elongation at break as measured at 120°C of 200% or more exhibits good moldability and good conformability to the molding surface of a mold during the course of preforming, prior to injection molding, noting the paragraph bridging pages 12 and 13 of Applicants' specification.

Furthermore, the specific elongation at break as measured at 25°C and 120°C as in the present claims, is achieved by the specific composition of materials as in claim 1, especially content of the rubber material.

As will be discussed in more detail infra, the Examples and particularly the Comparative Examples in Applicants original disclosure, starting on page 29 thereof, with the Comparative Examples 1-3 on pages 33-35, and with results of the Examples and Comparative Examples shown in Table 1 on page 35 of Applicants' specification, show importance of the presently claimed elongation at break at both 120°C and at 25°C, for achieving benefits of the present invention of moldability of the decorative sheet, trimming performance and continuous printability.

More particularly, it is respectfully submitted that the teachings of the applied reference would have neither disclosed nor would have suggested such a decorative sheet for simultaneous decoration and injection molding as in the present claims, having features as discussed previously in connection with claim 1, and, additionally, wherein the decorative sheet has this elongation at break, as measured at 25°C, of 3-10%, in both a flow direction during formation of the base film and a direction perpendicular to the flow direction (see claim 14); and/or wherein such decorative sheet has the elongation at break, as measured at 120°C, of 200% or more, in both the flow direction during formation of the base film and the direction perpendicular to the flow direction (see claim 15).

In connection with the decorative sheets having such elongations at 25°C and 120°C in both the flow direction during formation of the base film and the direction perpendicular to the flow direction, attention is again directed to Table 1 on page 35, and particularly Comparative Examples 1-3, showing the unexpectedly better results achieved where the elongation at break at both 25°C and 120°C, in both the flow

direction during formation of the base film and the direction perpendicular to the flow direction, are that set forth in the present claims 14 and 15.

In addition, it is respectfully submitted that the teachings of the applied reference would have neither disclosed nor would have suggested such a decorative sheet as in the present claims, having features as discussed previously in connection with claim 1, and, moreover, wherein the decorative sheet has an elongation at break as measured at 40°C which is in a range of 10-20%. See claim 13.

A decorative sheet having the recited elongation at break as measured at 40°C, as in claim 13, provides advantages from the viewpoint of registering the sheet for printing, and to avoid breakage of the base film, for example, in a drying step performed when the decorative layer is printed on the base film, and to achieve a desired flexibility when the resin molded product is removed from a mold. Note the sole full paragraph on page 13 of Applicants' specification.

In addition, it is respectfully submitted that the teachings of the applied reference would have neither disclosed nor would have suggested such decorative sheet as in the present claims, having features as discussed previously in connection with claim 1, and with additional features as in the other dependent claims reciting the decorative sheet, including (but not limited to) wherein the decorative sheet has an elongation at break as measured at 25°C as further defined in claim 2, and/or has an elongation at break as measured at 120°C as further defined in claims 3 and 7.

Furthermore, it is respectfully submitted that the teachings of the applied reference would have neither disclosed nor would have suggested such a decorated

resin molded product as in the present claims, utilizing the decorative sheet as respectively in claims 1 and 9 (see claims 6 and 10).

The present invention relates to a decorative sheet employed for simultaneous decoration and molding, to form a molded article during an injection molding process, and to a decorated resin molded product using such sheet. As to the simultaneous decoration and injection molding, note section [0002] on pages 1 and 2 of Applicants' specification.

In general, in the decorated resin molded product, a laminate-type decorative sheet having an area exceeding the surface area of the molded product is bonded to a resin material of the molded product. The decorative sheet must be subjected to a step called "trimming", for cutting or removing an excess portion provided along the periphery of the molded product. Such trimming is performed at about 0-40°C (for example, generally at room temperature, about 25°C).

However, in previous decorative sheets used for simultaneous decoration and injection molding, a problem arises in that in trimming the excess portion of the decorative sheet, the excess portion fails to be cut successfully during the course of trimming, and the excess decorative sheet portion remains on the molded product, or the decorative sheet is exfoliated at an end portion of the molded product.

Against this background, Applicants provide a decorative sheet which avoids such problem in connection with trimming, enabling easy trimming, and which also exhibits good conformability to the molding surface of a mold and which is less likely to produce wrinkling, blistering, breakage, etc., when laminated on and united with a resin molding through injection molding. Applicants have found that by using a decorative sheet having an elongation at break as measured at 25°C falling within a

range as in the present claims, problems in connection with, for example, trimming, as discussed in the foregoing, can be avoided.

As to advantages achieved according to the present invention, having elongation at break as in the present claims, attention is respectfully directed to the Examples and Comparative Examples on pages 29-35 of Applicants' specification, and, in particular, note results shown in Table 1 on page 35 of Applicants' specification. As can be seen by these Examples and Comparative Examples, the present invention achieves moldability, trimming performance and printability, which combination of features is not achieved by any of the Comparative Examples.

It is emphasized that it is important that the elongation at break at the lower temperature of 25°C is 3-10%. As shown in Comparative Examples 1-3 and seen in Table 1 on page 35 of Applicants' specification, even where the elongation at break at 120°C is 200% or more, where the elongation at break at 25°C is outside the scope of the present claims, at least one of moldability, trimming performance and continuous printability is not achieved. That is, in order to achieve the effects of the present invention, it is necessary to select the specified ranges of the elongation at break at both temperatures of 25°C and 120°C.

Moreover, and as indicated previously, the base film formed of an acrylic resin composition containing at least one rubber material selected from a specific group thereof, and with a content of the rubber material, as in the present claims, can achieve such elongation at break at both 25°C and 120°C as in the present claims.

Mori, et al. discloses a foil-decorating sheet used for decorating at the same time as molding. The foil-decorating sheet is comprised of a laminate of two or more types of films, and which is to be set in an injection mold for being integrally bonded to a surface of a molding resin, a surface film of the laminated film which is bonded



to the molding resin having a peel strength of not less than 1 kgf/inch width at least at the interface between the surface film of the laminated film bonded to the molding resin and the molding resin; and wherein at least a transparent acrylic film is laminated on the surface film bonded to the molding resin, with a decorative layer formed between the surface film bonded to the molding resin and the acrylic film. Note the paragraph bridging columns 1 and 2 of this patent. This patent further discloses that such a foil-decorating sheet, as discussed in the foregoing, when a specific tensile test is carried out under an ambient temperature condition of 110°C, exhibits a tensile elongation at break of not less than 150%. Note column 2, lines 5-14 of this patent. See also column 6, lines 3-16; and column 7, lines 17-27, of this patent. See also column 8, lines 13-17, as to why the temperature was set at 110°C for the tensile elongation test.

As acknowledged by the Examiner in Item 4, on page 2 of the Office Action mailed December 9, 2011, Mori, et al. is silent on the elongation at break as measured at 25°C, of 3-10%.

Contrary to the conclusion by the Examiner, it is respectfully submitted that the Examiner has not established that such elongation at break as measured at 25°C as in the present claims would have been inherent, or obvious.

Thus, attention is respectfully directed to Comparative Example 2 on pages 33 and 34 of Applicants' specification, having an elongation at break at 120°C within the scope of the present claims, yet having an elongation at break as measured at 25°C outside the scope of the present claims. It is respectfully submitted that, for example, Comparative Example 2 rebuts any conclusion by the Examiner of inherency.

Furthermore, Applicants respectfully traverse the conclusion by the Examiner of obviousness of the elongation at break as measured at 25°C, as in the present claims. It is respectfully submitted that there is no basis for such conclusion of obviousness; in this regard, it is respectfully submitted that the applied reference does not even describe the elongation at break at 25°C being a result-affecting parameter; and, absent hindsight use of Applicants' disclosure, which hindsight use is improper under the guidelines of 35 USC 103, it is respectfully submitted that there is no basis for providing an elongation at break as measured at 25°C as in the present claims.

Furthermore, the unexpectedly better results achieved by the decorative sheet having an elongation at break as measured at 25°C as in the present claims, discussed in the foregoing and as shown in the Examples and Comparative Examples in Applicants' specification, particularly Comparative Examples 2 and 3 thereof, provide a basis for a conclusion of unobviousness of the presently claimed invention. In this regard, it is emphasized that the present invention achieves easy trimming, together with other good properties including good moldability. Mori, et al. does not even refer to trimming. Clearly, the applied reference would have neither disclosed, nor would have suggested, features of the present invention including elongation at break as measured at 25°C of the decorative sheet, and advantages due thereto.

As to the advantages achieved with an elongation at break of the decorated sheet as in the present claims, attention is particularly directed to Comparative Examples 2 and 3. Each of these Comparative Examples has an elongation at break at 120°C within the scope of the present claims, but an elongation at break at 25°C outside the scope of the present claims. As can be seen in Table 1 on page 35



of Applicants' specification, trimming performance of Comparative Example 3 is bad, and continuous printability in Comparative Example 2 is bad. In contrast, Examples 1 and 2 have decorative sheets capable of good moldability and trimming performance, as well as continuous printability.

It is emphasized that the base film formed of the acrylic resin composition containing the polyacrylate and/or a polymethacrylate, and at least one rubber material selected from the group consisting of acrylic rubber, butadiene rubber and silicon rubber, with content of the rubber material included in the base film as in the present claims, can achieve the specific elongation at break as measured at both 25°C and 120°C as in the present claims, providing advantageous effects of the present invention. It is respectfully submitted that Mori, et al. would have neither disclosed nor would have suggested the specific composition of acrylate/methacrylate and rubber material as in the present claims, or content of the rubber material, or elongation at break achieved thereby, and advantages thereof.

The contentions by the Examiner in the paragraph bridging pages 2 and 3 of the Office Action mailed December 9, 2011, that it "is elementary that a mere recitation of a newly discovered property, inherently possessed by the things in the prior art, does not cause a claim drawn to those things to distinguish over the prior art"; and that it is "inherent that the inclusion of the same resin composition in [Mori, et al.] would possess the same elongation at break as measured in both a flow direction during formation of the base film and a direction perpendicular to the flow direction at 25°C and 40°C as the instant application because it possesses all the other claimed properties in the same structure", are noted. It is respectfully submitted, however, that the same resin composition of the base film of the present claims is not disclosed in Mori, et al.; for example, content of the rubber material as

in the present claims, is not disclosed in Mori, et al., and for this reason alone, it is respectfully submitted that the “inherency” basis for the rejection of claims in the Office Action mailed December 9, 2011, must fail.

The additional contention by the Examiner in the first four lines of Item 5 on page 3 of the Office Action mailed December 9, 2011, that the elongation at break as measured at 25°C and as measured at 40°C, as in various of the present claims, of an acrylic resin would have been deemed by one of ordinary skill in the art as an obvious property of the resulting material, is respectfully traversed. As is clearly seen in Table 1 on page 35 of Applicants’ original disclosure, not all acrylic films have an elongation at break as in the present claims. As indicated previously, it is respectfully submitted that Mori, et al. does not disclose, nor would have suggested, that, e.g., elongation at break at 25°C, much less elongation at break at 40°C, are result-affecting parameters. Accordingly, absent hindsight use of Applicants’ disclosure, which hindsight use is improper under the requirements of 35 USC §103, it is respectfully submitted that there is no basis for a conclusion of obviousness of the presently claimed decorative sheet, having both an elongation at break as measured at 25°C of 3-10% and an elongation at break as measured at 120°C of 200% or more, especially with advantages thereof as discussed in the foregoing.

Contentions by the Examiner in Item 14 on page 7 of the Office Action mailed December 9, 2011, are noted. The Examiner’s attention is respectfully directed to Comparative Example 2, containing an acrylic film; note also Comparative Example 1, containing an acrylic film as the base film, each of Comparative Examples 1 and 2 having an elongation at break, measured at 25°C, outside the scope set forth in the present claims.

It is respectfully submitted that the Examiner has provided no basis for a conclusion of inherency for elongation at break at 25°C, especially noting composition of the base film as in all of the present claims, which includes at least one rubber material, and the content of the rubber material included in the base film.

In view of the foregoing comments and amendments, entry of the present amendments, and reconsideration and allowance of all claims in the application, are respectfully requested.

To the extent necessary, Applicants hereby petition for an extension of time under 37 CFR 1.136. Kindly charge any shortage of fees due in connection with the filing of this paper, including any extension of time fees, to the Deposit Account of Antonelli, Terry, Stout & Kraus, LLP, Account No. 01-2135 (case 396.46687X00), and please credit any overpayments to such Deposit Account.

Respectfully submitted,

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